- 1. Replacing current density measures
- 2. Parking ratio
- 3. Driveways
- 4. Building type
- 5. Building height
- 6. Garden size
- 7. Side and backyard set-backs
- 8. Single lot development: the need for cooperation among single lots
- 9. Character of the street

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REPLACING CURRENT DENSITY MEASURES

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We are beginning to think in terms of the following recommendation:

It is possible to formulate a redistribution of density in the three present zones, in such a way as to leave the total development potential of Pasadena unchanged. This would leave the total "development potential" of the city of Pasadena unchanged.

Under the umbrella of this idea, we are beginning to think that RM16 should be upzoned, RM48 should be downzoned, while RM32 should be left approximately as it is, perhaps with a very slight downzone, <u>but always in</u> <u>such a way as to leave the total development</u> potential of the city essentially unchanged.

Very roughly, then, we believe that it is desirable to "flatten out" the overall density distribution, in a way that avoids the extremes now presented by RM16 and RM48. We should like to hear task force discussion of this key idea.

In addition, there are various specific mechanisms which impinge on the density problem. We shall discuss these mechanisms at the task force discussions.

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PARKING RATIO

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One of the things which has killed the environment in Pasadena is, quite simply, the parking ratio.

Historic Pasadena apartments used to provide for a parking ratio of 1 per unit, or even less. In those days the environment, the balance of building volume, gardens, and parking area, left the environment intact.

Today, the widely accepted parking ratio is 2. This fact alone is responsible for a great deal of the current damage to the environment.

From preliminary studies of ours it has become clear that some reductions in current parking ratios will greatly facilitate the task of reconstructing the fabric of Pasadena.

An example might be the following rule: Each development shall have 1 parking space per bedroom, not exceeding 2 parking spaces per unit, with an average of 1.5 parking spaces per unit of the total development.

Whether it is expressed in this particular form or not -- in one form or another, we believe that reduction of parking ratio from 2 to 1.5 is almost necessary, in order for successful resolution of the zoning problem.

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DRIVEWAYS

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The present problem of multifamily housing and its bad effect on the environment, cannot be solved without altering the total amount of land devoted to asphalt. In particular, we consider it necessary to reduce the total number of driveways and their typical widths.

At present driveways take up an extraordinary amount of the total land in the city. If there is a driveway on every 50' lot, and this driveway is built to the current 12' standard, the driveways alone will then consume 25% of all available private land in the city.

This matter cannot be changed, until negotiation has taken place with public works. Neverthless, we believe it is essential that the task force should recognise that adherence to standards which have been set, unintentionally destroys the fabric of ther town, by making reasonable forms of open space, and building typoe, virutally impossible.

We believe that three forms of change should be contemplated:

1. A modification of driveway width, with limitation of curb cuts, and narrower dirveways than are currently specified by public works regulations.

2. A prohibition on all double width driveways, with possible use of cut-outs, along the length of the driveway, to permit passing.

3. Gradual introduction of a form of driveway-sharing, which permits more use of back alleys and communicating parking aisles at the back of lots, and reduces the number of driveways from one every 50' (the present figure), to a new statistic perhaps going as low as one every 150'.

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BUILDING TYPE

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with Phoebe Wall

There are consistent characteristics of the older buildings that constitute Pasadena's architectural heritage. These are

1) A building configuration that defines coherently shaped open space.

2) Legibility of individual dwellings and entries in multi-unit buildings

3) An interconnection of some form of semi-private space, either in the form of courtyards or porches, between public streets and buildings.

Newer building types built to current zoning standards typically lack all three of these characteristics.

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BUILDING HEIGHT

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After careful examination of the present and historic environments in Pasadena, we have come to the following conclusions about building height.

1. One story buildings are useful and welcome everywhere. There is a possibility that some very limited one story sections might be required, at the front of some portions of two storsy buildings, when they are built close to the street.

2. The main character of Pasadena is a two-story character.

Although there is already a good deal of three story construction, throughout the Pasadena neighborhoods, we have found that these three story buildings are almost universally wrong, when built close to the street.

This is not easy to argue. There is nothing which we can point to that is specifically damaging or repugnant about three story buildings. However, it is possible to say that whenever there are two story buildings, the feeling seems "like Pasadena", and that whenever three story buildings occur along streets, there appears to be an intrusion, a more massive feeling, and and feeling of bigness and alienation.

This feeling does not occur (obviously) in commercial and central downtown areas.

Our studies appear to show that even relatively high densities in the so-called RM48 areas, can be attained without going to three stories overall. We cannot yet be certain on this point.

Nevertheless, we believe that every effort must be made, to preserve a maximum height of two stories along streets, whenever possible. 3. Three stories. Our studies have also shown that limited use of three story buildings may not be damaging in back areas of lots. in various experiments we have tried restricting them to the back 30% of the lot, and back 40% of the lot. This type of rule is not yet perfected, and we are not yet ready to offer a possible rule. However, it is likely that we shall recommend some form of restriction, to keep three storey building away from streets, so that the streets themselves maintain an essentially one and two story character.

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GARDEN SIZE

On this issue, there is still some debate among the principals.

Center for Environmental Structure Daniel Solomon and Associates Christopher Alexander Daniel Solomon Artemis Anninou Kathryn Clarke with Phoebe Wall In another paper we have drawn attention to the important qualities of open space, which are typical of the Pasadena heritage.

In that paper we have identified both courtyards (internal gardens), and well defined front and side gardens, with coherent space, as most typical of the Pasadena character, and most important in the preservation of its outdoor space and feeling.

In this paper, we discuss only the size of this outdoor space.

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It is our belief that the open space, and its size and character, is the single most important thing defining the quality of the environment in Pasadena. In order to create a harmonious atmopshere in the city, and in order to preserve the character of the neighborhoods, or to creater a character which has life, and pleasantness, it is necessary to focus first, on the overall shape, organisation, and distribution of outdoor space. However, equally critical, and more difficult to solve, is the matter of size.

Under present zoning law, the overall amount of outdoor space which is allocated to any given parcel, is broken up, and made essentially useless, so that very little remains for human purposes.

The actual quantity set aside, by present ordinances, is not low.

Typical 50x180 lot in RM 16, 32 and 48:

Zone	RM16	R M 3 2	RM48
Total	60%	40%	40%
required	5400	3600	3600
open			
space			
	40%	60% lot	coverage

However, these fairly generous amounts are rendered useless, because of the configurations imposed by ordinance.

24% of the outdoor land is used for driveways. 20% is used in side yard setbacks. 5% is used in back yard setbacks. 10% is used in front yard setbacks. The remainder, available as genuinely useful and positive open space that can form a garden for the use of the people living in the apartments, is negligible.

Even those developers who make an effort to provide outdoor space (in the form of pedestrian streets, landscaping, or courtyards) are constrained by ordinance to provide a tiny amount for this purpose.

Further, even when one tries to solve this problem, by showing beautiful small gardens and courtyards on a drawing, once again, because of presently imposed conditions, the space necessarily ends up tiny. These tiny beautiful spaces, though successful for low buildings, are only good in rare cases, when placed among two story buildings.

All in all, it <u>appears</u> almost impossible, or unrealistic, to make larger gardens at prevailing Pasadena densities.

In contrast to the apparent impossibility of making large gardens under present densities, careful examination of the real character of Pasadena streets and lots, shows that the gardens and courtyards which have the most beneficial effect on the environment, are in many cases, perhaps in most cases, very large.

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For example, the courtyard of the building on California west of South El Molino, has a courtyard which is about 80'x45' -- almost 3500 sf.

The front garden of the grey apartment building at the northwest corner of South El Molino and California, is about 45×60 -- 2700 sf. In traditional terms, this is rather a modest garden. It is almost at the low end of something whose space is adequate for emotional "breathing space".

Yet it is as big as 2700 sf, with a two storey building on one side, and a low hedge on the other three sides.

By contrast, the typical RM48 development at Holliston just north of Colorado, has a courtyard space perhaps 20x30, and surrounded on 70% of its perimeter with two story buildings. It is a meaningless small space, which feels deserted, and unpleasant. It has no emotional reward.

Even in cases where the scale of something seems to be tiny and charming, the fact is that when it appears adequate emotionally, pleasant and satisfying, it is almost invariably bigger than we think.

For example, the curving lane south of California, with small houses along it, is a case where the open space or garden happens to be street-like in character. At first sight, one would say that it is small, and supports the argument that outdoor space does not have to be large in order to be satisfying. But the actual dimensions are surprising. There are so many ins and outs, and so many secondary spaces which encroach from the sides and form the space, that the overall width varies from 25 to 60', and the length of the perceived space is on the order of 100'. Once again, even taking an average width, the effective size of the thing is on the order of about 3500 - 4500 sf.

Another case study, in the same area, is the three story apartment building on south ?, also just north of California. In this case, there is a large tree and a front garden. Unlike the small front yard setbacks which seem adequate but are not useful, this space seems generous. It works as a useful front garden. It is 45' x 75': with a slightly indented triangular shape: a total of about 3500 sf.

Sometimes the essential size of the outdoor garden is hard to see, because it crosses from one lot to another. For example, there is a small one storey Santa-Monica type bungalow duplex or triplex, on South El Molino. It has a garden on the left, which is perhaps 60 or 70 feet deep, and no more than 20' feet wide at the front, going down to 15' at the back. A first calculation suggests that this is a case where a small space is quite adequate (apparently its area is about 1200 sf). However, the reason why the space seems beautiful, is that there is an apartment building to the left, with a generous side-yard setback. The bushes, shrubs and garden from this apartment building are felt and perceived as part of the space. When we look at the space this way, it turns out that the real effective width of the small triangular garden is is about 40', and its real depth about 70' -- again a total area of some 2800 sf.

Another similar case is the beautiful set of four front lawns at Locust and Holliston. These lawns <u>together</u> make a beautiful space, which gives the life and character to these four houses. It is about 42' deep, and about 180 feet long -- a total size of almost 8000 sf. It does not seem very big. It seems small in scale, intimate, but adequate, and has some meaning.

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All in all, we have come to the conclusion that it is imperative that the environment of Pasadena, is made of beautiful gardens, which are adequate in size, meaningful in character. As far as their location is concerned, we believe they must be distributed -- some internal to the projects (so-called courtyards); other directly visible from the street (these are indented front gardens).

Some members of our team are of the opinion that this is the single most important issue in the project, and that it will be impossible to solve the environmental problems of Pasadena, unless this matter is addressed.

It requires that every project either provide a single coherent garden space of at least 3000 sf, or at least that it contribute directly to the formation of such a space, in conjunction with some other project.

To address it will require that a variety of measures be taken to consolidate land now wasted in set backs, driveways, front yards which are meaningless, and small meaningless planted areas.

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It is also important to note the following:

While the size of gardens is obviously an important factor, there are numerous examples of courtyard housing that demonstrate that the shape, containment, sequential organization, relationship to streets and character of continuous walls sometimes make small open spaces into places of great charm and richness.

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SIDE AND BACKYARD SET-BACKS

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For reasons stated in other papers in this series, it is clear that one of our most important tasks in the new zoning ordiannce, will be to preserve as much open space as possible, in the form of defined and useful space that makes real gardens, courtyards and so on.

It is unlikely that this can be done successfully, unless we find ways of overcoming the waste which is inherent in present setback regulations.

It is therefore extremely likely that we shall propose, among other things, some ways of reducing side and back yard setbacks, so that more of the space contributes to gardens and courtyards. Obviously this must be done with great care, and without having adverse effects on windows, property rights, light and air etc.

However, we believe that we shall be probably consider forms of regulation which permit zero lot line development along at least some percentage of the lot line (perhaps no more than 30%), provided this is done in a way which respects existing windows, and does not damage potential for development on adjoining parcels.

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SINGLE LOT DEVELOPMENT

THE NEED FOR COOPERATION AMONG SINGLE LOTS

Center for Environmental Structure Daniel Solomon and Associates Christopher Alexander Daniel Solomon Artemis Anninou Kathryn Clarke with Phoebe Wall One of the most significant facts in the zoning ordinance, is the fact that the majority of developments are made on single parcels. Paul Gleye's informal estimate is that 90% of all projects are single lot developments.

On the other hand, careful study of the environment which is desirable on a block, clearly shows that the formation of driveways, gardens, parking, and buildings which will be most beneficial, is an interlocked development, in which formations of parking, driveways, gardens, courtyards, and buildings, extend from lot to lot, and create large configurations than those which exist on single lots.

In short, the isolated development of single lots, <u>cannot solve the environmental problems</u> which <u>must be solved</u>. What is needed is some form of cooperation between projects, which allows each project to take its place within a larger whole, and to make a contribution to a larger whole.

We believe that this is a fundamental principle, which must guide us throughout the project.

This important principle arises for two reasons.

Most of the valuable configurations of gardens, courtyards, buildings, and parking, necessarily extend from lot to lot, when in their most desirable forms.

Second, the imposition of individual setbacks, and driveways on individual lots, is wasteful and damaging to the environment. In order to be guided by this principle, under practical real conditions where 90% of all developments are single lot developments, we shall have to devise methods which allow adjacent properties to <u>cooperate</u> with one another, <u>even when individually developed</u> -and this, to an extent hitherto almost unknown. We believe that a large part of the solution to the environmental problem lies in this cooperation.

For example, on one block we have studied, there are 42 lots available for development. Most of these lots cannot be aggregated before development. At present less than 10% of all applications are aggregated, and we believe it is unrealistic to increase this number very dramatically, even though incentives can be used to create some increase.

Instead, we believe that the solution to the problem, lies in a process where we encourage individual developments, on single and double lots, to create the kind of development which has a beautiful overall form and harmony, with aggregated gardens, driveways, parking, and building volumes all working together, <u>even though this is done piecemeal through individual lot development</u>.

In short, we must find ways of implementing a very high degree of cooperation between development on adjoining parcels, so that the overall and cooperative effect can produce this kind of coherent environment, within the framework of single-lot development.

We believe that this is possible.

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CHARACTER OF THE STREET

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In order to arrive at useful conclusions about zoning regulations on individual parcels, it will be necessary for us to develop a clear sense of the desirable character of streets in Pasadena, with respect to obvious features such as vegetation, width, building fronts and so on.

At present, we can make two simple observations:

1. It is necessary that buildings are oriented to the street, and not away from it. This requires that on every lot, there are at least some windows and entrances which address the street, and open from it.

2. It is important to take the historic character of street trees very seriously, and to consider a program of replanting and maintaining the avenues which exist now.

In addition, we are aware of several subtle problems, concerning width, building height in relation to street, glimpses of inner courtyards, construction of occasional buildings close to the sidewalks, use of front setbacks to form coherent space along the street.

These topics will be taken up in a later paper.

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